Observations of Comet a 1884, *made at Windsor, New South Wales.*

By John Tebbutt.

On the evening of January 14 I received from the Melbourne Observatory a telegram to the effect that a small comet was found there on the 11th. Its position and daily motion for the 12th were communicated, but owing to clouds and smoke I did not succeed in finding the comet till the 19th. It was then just beyond the reach of unassisted vision. In the telescope it presented itself as a round nebula, about two minutes of arc in diameter, with a bright condensation in the centre. There was no definite nucleus in the micrometer eye-piece, but a short tail could be distinguished. The comet faded very rapidly, and was observed with extreme difficulty on February 2. The accompanying places have been deduced from comparisons made with a square bar micrometer on the $4\frac{1}{2}$-inch equatorial. In bringing up the mean places of the comparison stars from the various authorities the precessions and secular variations have been adopted from Stone's Cape Catalogue. With the exception of star No. 6 no reliable authority exists for proper motion. The proper motion of this star is very large, and has been taken from that Catalogue. I trust at a future opportunity to be able to send a determination of the orbit. Considering the rapid fading of the comet from our view it is probable that the heliocentric motion is retrograde. I commenced observations of Pons' comet on January 13.

Apparent Places of Comet 1884.

Windsor Mean Time. 1884.					R.A.			Log $\frac{\rho}{P}$	N.P.D.			Log $\frac{\eta}{P}$	No. of Comps.	Comp. Star.
	d	h	m	s	h	m	s	+	°	′	″	+		
Jan.	19	9	37	42	22	54	35·76	8·8669	131	46	56·3	9·6972	6	1
	19	9	37	42	22	54	35·55	8·8669	131	46	56·5	9·6972	6	2
	21	9	26	7	23	5	2·58	8·8712	131	54	59·2	9·6657	4	3
	21	9	31	39	23	5	3·91	8·8701	131	55	2·7	9·6781	5	4
	22	9	3	4	23	9	44·99	8·8735	131	57	21·3	9·6073	8	3
	22	9	3	4	23	9	44·93	8·8735	131	57	19·5	9·6073	8	4
	23	9	22	11	23	14	18·89	8·8726	131	58	45·3	9·6531	5	3
	23	9	22	11	23	14	18·79	8·8726	131	58	43·8	9·6531	5	4
	24	8	51	49	23	18	29·18	8·8729	131	59	15·1	9·5742	5	3
	24	8	51	49	23	18	29·05	8·8729	131	59	12·6	9·5742	5	4
	25	9	14	35	23	22	34·15	8·8734	131	59	19·6	9·6338	1	3
	25	9	14	35	23	22	34·13	8·8734	131	59	18·7	9·6338	1	4
	27	8	50	59	23	29	57·41	8·8727	131	57	33·4	9·5731	2	3
	27	8	50	59	23	29	57·32	8·8727	131	57	31·6	9·5731	2	4
	28	8	56	48	23	33	26·24	8·8731	131	55	54·1	9·5907	4	5
	28	8	56	48	23	33	26·07	8·8731	131	55	50·9	9·5907	4	6
Feb.	2	9	38	9	23	48	48·21	8·8661	131	44	19·1	9·7002	3	7

Mean Places of the Comparison Stars for 1884·0, *with the Reductions to the Apparent Places for the Dates of Observation.*

Star.	Mean R.A.	Reduction.	Mean N.P.D.	Reduction.	Authority for Star's Mean Place.
	h m s	s	° ′ ″	″	
1	22 49 17·36	−0·93	131 42 57·1	+5·4	Cordoba Zone 29, No. 51; Cape Cat. 1880, No. 11941.
2	22 53 50·84	−0·92	131 46 18·8	+5·7	Wash. Cat. 1860, 2nd ed., No. 10109; Cordoba Zone 29, No. 53; Cape Cat. 1880, No. 11966.
3	23 8 32·22	−0·88	131 44 0·2	+6·5	Wash. Cat. 1860, 2nd ed., No. 10232; Melb. Cat. 1870, No. 1183; Cordoba Zone 29, No. 66; Cape Cat. 1880, No. 12062.
4	23 10 25·93	−0·87	131 49 39·8	+6·6	Wash. Cat. 1860, 2nd ed., No. 10249; Cordoba Zone 29, No. 67; Cape Cat. 1880, No. 12080.
3	23 8 32·22	−0·89	131 44 0·2	+6·4	See authorities above.
4	23 10 25·93	−0·88	131 49 39·8	+6·5	,, ,,
3	23 8 32·22	−0·90	131 44 0·2	+6·2	,, ,,
4	23 10 25·93	−0·89	131 49 39·8	+6·4	,, ,,
3	23 8 32·22	−0·91	131 44 0·2	+6·1	,, ,,
4	23 10 25·93	−0·90	131 49 39·8	+6·2	,, ,,
3	23 8 32·22	−0·92	131 44 0·2	+6·0	,, ,,
4	23 10 25·93	−0·92	131 49 39·8	+6·1	,, ,,
3	23 8 32·22	−0·94	131 44 0·2	+5·7	,, ,,
4	23 10 25·93	−0·94	131 49 39·8	+5·8	,, ,,
5	23 31 50·93	−0·88	132 12 28·1	+7·3	Cordoba Zone 51, No. 25; Cape Cat. 1880, No. 12222.
6	23 40 23·59	−0·84	132 11 53·8	+7·9	Melb. Obs. 1874, No. 404; Melb. Obs. 1875, No. 341; Cordoba Zone 51, No. 37; Cape Cat. 1880, No. 12277.
7	23 45 39·68	−0·85	131 28 14·3	+7·5	Cordoba Zone 51, No. 46; Cape Cat. 1880, No. 12319.

Windsor, N. S. Wales,
February 12, 1884.

Observations of Comet Ross made at the Observatory, Melbourne. By R. L. J. Ellery, F.R.S.

Date, Melb. M.T. 1884.	Δα	Δδ	App. α.	App. δ. South.	Comparison Stars. α	Comparison Stars. δ	Authority.
d h m s	m s	′ ″	h m s	° ′ ″	h m s	° ′ ″	
Jan. 12 9 3 29	+4 31·0	+ 0 5·6	22 3 37·0	40 7 14	21 59 6·0	40 6 8·4	Cape Cat. 11603
17 9 16 31	+4 28·3	+ 7 19·6	22 42 35·2	41 30 57	22 38 6·9	41 22 37·4	Cape Cat. 11850
18 8 31 25	+0 38·0	− 2 42·0	22 48 38·5	41 40 22	22 49 16·5	41 43 3·9	Cape Cat. 11941
28 10 41 30	+1 0·0	−11 15·1	23 33 45·0	41 55 54	23 32 45·0	42 7 9·1	Washington 10436
29 9 29 3	−3 29·6	−17 46·4	23 36 53·0	41 54 10	23 40 22·6	42 11 56·4	Cape Cat. 12277
Feb. 1 9 25 2	+0 18·3	+15 27·7	23 45 57·1	41 43 47	23 45 38·6	41 28 19·3	Cape Cat. 12319
4 9 24 0	−0 24·5	+18 12·3	23 54 9·0	41 38 26	23 54 33·7	41 20 13·7	Cape Cat. 12395
7 8 44 31	−2 16·2	− 2 32·0	—	—	0 3 38	41 33 47	Anonymous

Cloudy weather came on after the 7th, and there was no really clear sky on any evening until the 19th, when a very rough measure was obtained viz.:—

R.A. ... h m s 0 25 50 Decl. ... ° ′ ″ 40 56 0 S.

The comet was then so faint as to be seen with difficulty, and no glimpse of it has been obtained since, owing to continual cloudy evenings. It was rapidly increasing its geocentric distance from January 12.